

INSTRUCTIONS: This pre-math test should be used as a tool for self-evaluation and taken prior to attending the Inter-Service Radio Frequency Management School. Read each question thoroughly and select the best answer from the choices given. This examination is composed of 50 questions.

1. 1,352

2,477

+4,145

a. 7,964

c. 8,874

b. 7,974

d. 8,974

2. 47.67

+53.34

a. 91.91

c. 101.91

b. 91.01

d. 101.01

3. 52.179

254.013

612.886

+743.912

a. 1,662.99

c. 1,563.0

b. 156.3

d. 166.299

4. 1,100,101

-275,014

a. 825,087

c. 924,087

b. 824,987

d. 925.087

5. 63.291

-48.392

a. 101.683

c. 15.101

b. 15.909

d. 14.899

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$$\begin{array}{r} 6. \quad 58,148.010 \\ - 1,939.881 \\ \hline \end{array}$$

- a. 57,108.129
 - b. 56,108.129
 - c. 56,208.129
 - d. 57,208.129

$$\begin{array}{r} 7. \quad 554 \\ \times 13 \end{array}$$

- a. 7,002
 - b. 7,202
 - c. 7,192
 - d. 7,102

$$8. \quad (4 \times 6) (28 \times 10) =$$

- a. 6,720
 - b. 672
 - c. 6,480
 - d. 648

$$\begin{array}{r} 9. \\ \times 2.003 \\ \hline \end{array}$$

$$10. \quad 266 \div 14 =$$

- a. 14
 - b. 16
 - c. 19
 - d. 24

$$11. \quad 62,552 \div 742 =$$

- a. $83 \frac{33}{371}$

b. $84 \frac{117}{371}$

c. $83 \frac{9}{53}$

d. $84 \frac{16}{53}$

$$12. \quad 1,506 \div 14$$

- a. 107.77
 - b. 106.981
 - c. 106.573
 - d. 107.571

$$13. \quad \frac{22+8}{4+2} =$$

- a. 5
 - b. 6
 - c. 8
 - d. 18

$$14. \quad \frac{8 \times 5 \times 6}{3 \times 2 \times 5} =$$

$$15. \quad \frac{(4 \times 6) + 21}{(3 \times 2) + 3} =$$

$$16. \quad \frac{7}{8} =$$

$$17. \quad \frac{5}{9} \times \frac{18}{35} =$$

- a. $\frac{1}{3}$
 - b. $\frac{2}{5}$
 - c. $\frac{3}{7}$
 - d. $\frac{2}{7}$

$$18. \quad \frac{36}{6} + \frac{11}{6} + \frac{25}{6} =$$

- a. 14
 - b. 12
 - c. 11
 - d. 9

$$19. \quad 300,000 \text{ Hz} =$$

- a. 300 MHz
 - b. 30 MHz
 - c. 3 MHz
 - d. .3 MHz

$$20. \quad 30 \text{ kHz} =$$

- a. 3 MHz
 - b. 30,000 Hz
 - c. .03 GHz
 - d. .0003 THz

$$21. \quad 5 \text{ M (Mega)} =$$

- a. 5×10^6 c. 5×10^{-3}
 b. 5×10^3 d. 5×10^{-6}

22. 181,000 =

- a. 181m
 - b. 181k
 - c. 181M
 - d. 181u

23 14 x 002 =

- a. 24 kilo
 - b. 28 kilo
 - c. 28 milli
 - d. 24 milli

24. $73 \text{ microwatts} =$

- a. $.0000073 \text{ watts}$
- c. $.00073 \text{ watts}$
- b. $.000073 \text{ watts}$
- d. $.0073 \text{ watts}$

25. $6 \text{ Mega} + 5 \text{ kilo} =$

- a. $5,006,000$
- c. $6,005,000$
- b. $5,600,000$
- d. $6,500,000$

26. $.000156 =$

- a. 1.56×10^{-3}
- c. 1.56×10^{-4}
- b. 1.56×10^3
- d. 1.56×10^4

27. $\frac{7.72 \times 10^4}{3.86 \times 10^{-4}} =$

- a. 2×10^8
- c. 2×10^4
- b. 2×10^{-8}
- d. 2

28. $.00501 =$

- a. 5.01×10^3
- c. 5.01×10^2
- b. 5.01×10^{-3}
- d. 5.01×10^{-2}

29. $15 \times 10^2 \times 10^3 =$

- a. 1.5×10^6
- c. 15×10^5
- b. 1500×10^3
- d. All of the above.

30. $5.8 \text{ milliwatts} =$

- a. $5.8 \times 10^6 \text{ watts}$
- c. $5.8 \times 10^{-6} \text{ watts}$
- b. $5.8 \times 10^3 \text{ watts}$
- d. $5.8 \times 10^{-3} \text{ watts}$

31. $(2 \times 10^3)^2 =$

- | | |
|--------------------|--------------------|
| a. 4×10^9 | c. 4×10^6 |
| b. 4×10^3 | d. 2×10^9 |

32. $8 \times 8^3 \times 8^4 =$

- | | |
|-------------|----------|
| a. 8^{12} | c. 8^8 |
| b. 8^{10} | d. 8^7 |

33. $\frac{4^3 \times 5^2 \times 4}{4^3 \times 5^2} =$

- | | |
|------|-------|
| a. 1 | c. 20 |
| b. 4 | d. 25 |

34. $\frac{5^5 \times 5^3}{5^2 \times 5 \times 5^3} =$

- | | |
|-------|--------|
| a. 25 | c. 125 |
| b. 5 | d. .25 |

35. $\frac{10^8}{10^3} =$

- | | |
|-----------|--------------|
| a. 1,000 | c. 100,000 |
| b. 10,000 | d. 1,000,000 |

36. $10 \times 10^3 =$

- | | |
|------------|----------|
| a. 100,000 | c. 1,000 |
| b. 10,000 | d. 100 |

37. $\frac{10^3}{10^{-2}} =$

- | | |
|-----------|--------------|
| a. 10^5 | c. 10^{-5} |
| b. 10^1 | d. 10^{-1} |

38. If $A = \frac{B}{C}$, then $B =$
- a. $\frac{A}{C}$
 - c. AC
 - b. $\frac{C}{A}$
 - d. None of the above
39. If $A^2 = BC$, then $C =$
- a. $\frac{A^2}{B}$
 - c. $\frac{B}{A^2}$
 - b. A^2B
 - d. None of the above
40. If $B = \sqrt[4]{AC}$, then $A =$
- a. $\frac{C}{B^2}$
 - c. $\frac{B^2}{C}$
 - b. B^2C
 - d. $B\sqrt[4]{C}$
41. If $2B + 2C = \sqrt{A}$, then $A =$
- a. $(B + C)^4$
 - c. $\sqrt[4]{2B + 2C}$
 - b. $(2B + 2C)^2$
 - d. $2B \times 2C$
42. If $A = B + C - D$, then $C =$
- a. $A + B - D$
 - c. $A - B - D$
 - b. $A + B + D$
 - d. $A + D - B$
43. $P = IE$; If $I = 3m$ and $E = 15k$, then $P =$
- a. 45
 - c. 45M
 - b. 45k
 - d. 45m

44. $E = \frac{P}{I}$; If $P = 15\text{m}$ and $I = 30\mu$, then $E =$

 - a. 200
 - b. 500
 - c. 2k
 - d. 5k

45. $37\text{dBm} =$

 - a. 7dBw
 - b. 17Dbw
 - c. 500Mw
 - d. 67Dbw

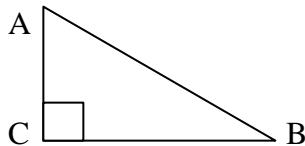
46. $3\text{dBW} =$

 - a. 200 watts
 - b. 20 watts
 - c. 2 watts
 - d. .2 watts

47. 10dB equates to a ratio of:

 - a. 58
 - b. 10
 - c. 100
 - d. 20

WHILE ANSWERING THE REMAINING QUESTIONS, REFER TO THE FOLLOWING
RIGHT TRIANGLE DIAGRAM:



48. If Angle A is 54° , then Angle B =
a. 46° c. 26°
b. 36° d. 54°

49. If Line CB = 16.5 and Line AC = 12, then Line AB =
a. 25.2 c. 15
b. 11.7 d. 20.4

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50. The sum of Angles A, B and C =

- a. 360°
- c. 90°
- b. 180°
- d. 270°

You are now done. Please check over your answers and brush up on your weak areas. Any questions, call IRFMS at (228) 377-0625 DSN: 597-0625 and ask for the Math Block Instructor. If you want your pre-test graded by the Math Block Instructor, FAX the completed exam with your answers to: (228) 377-5066 DSN: 597-5066

ADMINISTRATIVE INFORMATION

Your rank:

Your last name:

Your unit:

Your FAX number:

Your E-mail address: